CLIMATE CHANGE RESEARCH PROGRAM

Fiscal Year 2017-2018 Program Solicitation

FEBRUARY 28, 2018

With corrections and updates through March 23, 2018

<p align="center" style="color:red">CORRECTED SOLICITATION</p>

The Climate Change Research Program staff is posting a corrected version of the 2018 Program Solicitation, which incorporates clarifying and technical edits to the original February 2018 version of the document. This memo provides a summary of the revisions.

Summary of Changes presented in Proposed Final Guidelines

- New Policy - Partnerships with State Entities (Section I, page 1): In order to avoid conflicts of interest in proposal review and award decisions, **State agencies are not eligible** to provide letters of support or general statements endorsing research applicants or proposals. Also, **departments cannot be an official partner or supporter** of research proposals. However, during the post-award phase of this program the SGC will work with grant awardees to identify and assembly State agencies and departments with an interest in specific research projects. The SGC intends to build a collaborative support system with its member agencies that provides awarded research projects with data, information, input, advice, feedback and technical assistance requested by a PI to conduct research, address research questions, ensure meaningful engagement with stakeholders, and fully consider the potential policy outcomes of the research.

- Addition of Attachment 5 - Quality Assurance Statement (QAS) Instructions: In response to questions about when and how to submit a QAS (referred to on page 17 of the original Submission), a new attachment (**Attachment 5**, Quality Assurance Statement**)** is included in this solicitation and the QAS is referenced in Sections V.A. and V.C.11.

- Eligible Costs – Section IV.C. (page 6): Clarifies the 5% maximum for research administrative fees. These costs pay for financial or administrative support staff performing specific project duties. Research management duties (such as project coordination, reporting, etc.) are not considered administrative costs.

- Summary of Prior Research Funded by the State - Sections V.A. and V.C.9. : Updated name (formerly Prior Research Summary) and clarification of the requirement for this submission. The update simplifies the information required and no longer asks for samples of past projects and reduces the number of years that need to be reported (from the past five years to three years).

- Research Proposal Submission Organization and Content – Section V.C.: Proposals are not required to adhere strictly to suggested format of the templates or directions provided. Flexibility is allowed to assist researchers to better articulate the goals and objectives of the proposed research.

- Biographical Sketches – Section V.C.6.: Proposals may include a separate Collaborators and Other Affiliations document that compiles affiliate information for all senior personnel, rather than including this information as part of the two-page biographical sketch for each researcher.

- Clean-Up Items:
  - *Executive Summary* – proposals are due by 5:00 Pacific **Daylight** Time.
  - Project Budget (page 9): available for download on the GRanTS web portal. The template is optional. Lead applicants are allowed to use internal templates as long as they provide all of the required information.
  - Project Narrative (page 10): Three required elements (Description, Research Merits, and Meaningful Engagement). Additional subjects and themes are recommended, but not required.
  - Evaluation Criteria (page 14): Corrected the weight of the evaluation criteria – 65% Research Merit, 35% Meaningful Engagement.

EXECUTIVE SUMMARY

<u>**State Agency Name:**</u> Strategic Growth Council (SGC), Governor's Office of Planning and Research

<u>**State Funding Opportunity Title**</u>: California Climate Investments: Climate Change Research Program

<u>**Submission Date:**</u> Research Proposal Submission Packages are due no later than 5:00 p.m. <mark>Pacific Daylight Time</mark>, Friday, April 13, 2018, using the California Department of Water Resources'[1] Grants Review and Tracking System (GRanTS). Submissions uploaded after the closing date and time will not be accepted.

<u>**State Funding Opportunity Description:**</u> The Strategic Growth Council was allocated a total of $11 million in California Climate Investments Program funds in the fiscal year 2017- 2018 budget to administer a statewide research initiative to conduct outcome-based research that advances the State's carbon emissions reduction goals and focuses on areas including clean energy, adaptation, and resiliency. Successful research proposers and research projects must be located in California. The research submission package must demonstrate how the proposed research will contribute to achieving the seven program goals and respond to a 2018 research priority interest area described in the program's Research Investment Plan[2]. Research proposals must seek to address key questions, barriers, hurdles or opportunities that contribute to the advancement of new or developing climate initiatives that will facilitate the reduction of greenhouse gas emissions in California; and, provide benefits to low-income or disadvantaged communities.

This Funding Opportunity includes information needed to apply to the program, and the criteria for submitting a Research Proposal requesting between $100,000 and $4,000,000 in total state funding for a twelve-month to three-year period.

SGC will post a list of recommended research awards on July 20, 2018 and the Council will vote on approving the awards at the July 31, 2018 public meeting. Funded projects are anticipated to start no later than December 1, 2018 and all work must be completed on or before March 31, 2021.

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[1] http://water.ca.gov/grants/

[2] http://sgc.ca.gov/programs/climate-research/docs/20180130-Final_Research_Investment_Plan.pdf

TABLE OF CONTENTS

CALIFORNIA STRATEGIC
GROWTH COUNCIL

APPENDICES

ATTACHMENTS

CALIFORNIA STRATEGIC
GROWTH COUNCIL

I.   INTRODUCTION

A. PURPOSE OF THE SOLICITATION

The purpose of this solicitation is to allocate up to $11 million of grant funding appropriated in the fiscal 2017-18 budget for Climate Change Research Program projects that facilitate the reduction of greenhouse gas emissions, in areas including clean energy, adaptation, and resiliency. Awarded research projects will demonstrate how State investments can advance California's climate change goals while building innovative, outcome-driven partnerships between the State, the research community, and non-traditional research partners.

Please Note: In order to avoid conflicts of interest in proposal review and award decisions, State agencies are not eligible to provide letters of support or general statements endorsing research applicants or proposals. Also, departments cannot be an official partner or supporter of research proposals. However, during the post-award phase of this program the SGC will work with grant awardees to identify and assembly State agencies and departments with an interest in specific research projects. The SGC intends to build a collaborative support system with its member agencies that provides awarded research projects with data, information, input, advice, feedback and technical assistance requested by a PI to conduct research, address research questions, ensure meaningful engagement with stakeholders, and fully consider the potential policy outcomes of the research.

A proposal for a Climate Change Research Grant must include the following:

- Integrative research that addresses one or more of the research needs identified in the State's 2015 Climate Change Research Plan[3] – monitoring and modeling, greenhouse gas emission reduction, adaptation and resilience, and cross-cutting research needs;

- Research that facilitates the State's GHG emissions reduction goals;

- Results that deliver major economic, environmental, and/or public health benefits for Californians;

- Projects that consider how the proposed research could provide benefits to low-income households, low-income communities and/or disadvantaged communities as defined in division 26, part 2, chapter 4.1 of the Health and Safety Code[4];

- Research design and approaches that integrates meaningful community engagement with community members, decision makers, and other stakeholders throughout all of the phases of the project;; and,

- Projects must feature free and open access to research results and findings published through final manuscripts of scholarly articles, reports, and other product s produced entirely or primarily with program funding.

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[3] http://climatechange.ca.gov/climate_action_team/reports/CAT_research_plan_2015.pdf

[4] Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act
http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article=

II. DESCRIPTION OF FUNDING OPPORTUNITY

A. OVERVIEW

In 2017, the California Legislature passed Assembly Bill 109, which created a climate change research program within the Strategic Growth Council (SGC) allocating $11 million in Greenhouse Gas Reduction Fund revenues to support "research on reducing carbon emissions, including clean energy, adaptation, and resiliency, with an emphasis on California."[5] Statutory language directs that the SGC Climate Change Research program will develop a Research Investment Plan that outlines research needs; award grants on a competitive basis; and be open to eligible institutions, including the University of California, California State University, federally-funded national laboratories, and private, non-profit colleges and universities.

SGC's Research Investment Plan[6], adopted on January 29, 2018, guides the development and implementation of the research program and of this solicitation. In addition to this plan, California's climate goals are described in the laws, policies, and background documents listed in Appendix B.

B. PROGRAM GOALS

As noted in the Climate Change Research Program's adopted Research Investment Plan, the seven program goals (listed below) must be advanced to receive a project award[4]. Applicants must provide a brief description of how the proposed research addresses each of the goals. The goals are:

1) Invest in research that has a clear and demonstrated connection to the State's climate change goals, including greenhouse gas emission reduction and supporting climate adaptation and resilience.

2) Advance research to support low-income and disadvantaged communities, and advance equitable outcomes in the implementation of the State's climate change policies and investments.

3) Build a program that augments, builds connections, and fills gaps across existing research programs.

4) Prioritize outcome-based research linked to practical climate action.

5) Model meaningful engagement with the research community, community-based organizations and other stakeholders at all stages of the program to ensure relevance and utility of research process, projects, and results.

6) Continue to advance and develop a common research platform to support climate change planning, policy development, and implementation across all sectors at the state, regional, and community scale.

7) Leverage and complement existing research funding and policy innovations to accelerate climate change research, innovation, and policy and technology deployment.

C. RESEARCH PRIORITIES

The Climate Change Research Program's Research Investment Plan describes four Research Priorities areas (listed below) that are eligible for this funding cycle. Researchers must specify which priority area(s) a research proposal is addressing, and answer one or more applicable question(s) posed for each priority in section VI of the program's Adopted Research Investment Plan as identified in Appendix C, 2018 Research Investment Areas.

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[5] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB109

[6] http://sgc.ca.gov/programs/climate-research/docs/20180130-Final_Research_Investment_Plan.pdf

1) Supporting and protecting vulnerable communities from the impacts of climate change.

2) Accelerating and supporting transitions to climate smart communities.

3) Integrating land use, conservation, and management into California's climate change programs.

4) Increasing data accessibility and planning support for local and regional climate change planning.

Proposers will be evaluated on the ability to develop a submission package that specifically addresses a research question (Research Project Grant), or that constructs collaborative research partnerships to focus on one or multiple priority research areas (Research Partnership Grant).

D. PROGRAM AUTHORITY

The Strategic Growth Council is authorized to issue Climate Change Research Program grants under Item 0650-001-3228, provision 2 of section 2.00 of the Budget Act of 2017 (Chapter 249 of the Statutes of 2017).

E. KEY ACTIVITIES SCHEDULE

The solicitation's key activities, dates, and times are presented below.

Figure 1: Key Activities Schedule

ACTIVITY	DATE	TIME[7]
Solicitation Release	2/28/2018	
Pre-Submission Research Proposal Workshop	3/7/2018	**10:00 am**
Deadline for Written Questions	**3/12/2018**	**5:00 pm**
Anticipated Distribution of Questions and Answers	Week of 3/20/2018	
Deadline to Submit Research Proposals	**4/13/2018**	**5:00 pm**
List of Recommended Research Awards Posting Date	7/20/2018	
Strategic Growth Council Meeting Date (award approval)	7/31/2018	
Anticipated Agreement Start Date	9/30/2018	
Project Closeout Date	3/31/2021	
Agreement End Date	6/30/2021	

F. NOTICE OF PRE-SUBMISSION RESEARCH PROPOSAL WORKSHOP

Strategic Growth Council staff will hold one Pre-Submission Research Proposal Workshop to discuss the solicitation with researchers. Participation is optional but encouraged. Researchers may attend the workshop in-person, via the internet (WebEx), or via conference call on the date and at the time and location listed on the SGC website.

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[7] Pacific Standard Time or Pacific Daylight Time, whichever is being observed.

G.   QUESTIONS

During the solicitation process, direct questions to the SGC staff person listed below:

Elizabeth Grassi
Strategic Growth Council
1400 Tenth Street
Sacramento, California 95814
Telephone: (916) 327-5362
E-mail: research@SGC.CA.GOV

Proposers may ask questions at the Pre-Submission Research Proposal Workshop, and may submit written questions via mail, and by electronic mail. However, all **technical** questions must be received by the deadline listed in the "Key Activities Schedule" (Figure 1, above). **Non-technical** questions (e.g., questions concerning format requirements or attachment instructions) may be submitted to SGC staff at any time prior the deadline for submitting a Research Proposal.

SGC will email a question and answer document to all parties who attend the Pre-Submission Research Proposal Workshop, provided they included current contact information on the workshop's sign-in sheet. The SGC will also post this document on the Program's website: http://www.sgc.ca.gov/programs/climate-research/.

If an **ambiguity, conflict, discrepancy, omission, or other error** is discovered in the solicitation at any time prior to the submission deadline, the proposer may notify the SGC in writing and request modification or clarification of the solicitation. The SGC, at its discretion may provide modifications or clarifications either by an addendum to the solicitation or by a written notice to all parties who requested the solicitation. At its discretion, the SGC may re-open the question/answer period to provide all proposers the opportunity to seek any further clarification required.

Any verbal communication with a SGC employee concerning this solicitation is not binding on the State and will in no way alter a specification, term, or condition of the solicitation. Therefore, all communication should be directed in writing to the assigned the SGC staff person identified above.

III.   AWARD INFORMATION

A.   FUNDING AVAILABILITY

This solicitation will fund up to $11 million in grant awards. The chart below identifies the total, minimum, and maximum funding amounts for each project type. A Standard Grant or Cooperative Agreement, providing cost-reimbursements is the method used to execute awards to grant recipients.

Figure 2: Project Types

Project Type	Description	Amount	Number of Awards
Research Projects	Awarded to individual researchers or research groups to examine a specific research question. Research results are expected at the completion of the grant. Projects can be twelve to thirty-six months in duration. Projects with early research results are encouraged.	$100,000 to $1,000,000	Up to Ten
Research Partnerships	Awarded to research consortia, collaboratives, centers, or institutes. Broad focus on one or more of the program's research priority areas. Develop and model collaborative research partnerships. Model a process for academic collaboration and engagement with community-based organizations or other stakeholders throughout the research process.	$1,000,000 to $4,000,000	Up to Five

B.   PROJECT/AWARD PERIOD

All funds administered through this program must be encumbered by June 30, 2019, and closed out by June 30, 2021. Therefore, SGC requires that researchers complete all of project work by March 31, 2021.

C.   CHANGE IN FUNDING AMOUNT

Along with any other rights and remedies available to it, the Strategic Growth Council reserves the right to:

− Increase or decrease the available funding and the group minimum/maximum award amounts described in this section.

− Allocate any additional or un-awarded funds to passing proposals.

− Reduce funding to an amount deemed appropriate if the budgeted funds do not provide full funding for agreements. In this event, the Recipient and SGC's Agreement Manager will reach agreement on a reduced Scope of Work commensurate with available funding.

IV. ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

Researchers (including qualified scientists, engineers, and educators) affiliated with one of the following institutions:

- University of California,
- California State University,
- Federally-funded national laboratories located in California, and
- Private, non-profit colleges and universities located in California.

There are no restrictions about who can serve as the Principal Investigator (PI) within these Research Institutions; however, a PI must have a substantial role in designing and conducting the proposed research. Scientists and other employees can serve as a PI or co-PI on up to two proposals. Additionally, researchers may appear as a contributor on other solicitations (no limit). In the event that an individual exceeds the PI proposal limit, proposals received within the limit will be accepted based on earliest date and time of proposal submission (i.e., the first two proposals received prior to the deadline will be accepted and the remainder will be returned without review).

Researchers are encouraged to include contributors and sub-recipients from community-based organizations, non-profit organizations, local or tribal governments, or other institutions as an integral part of the research and as sub-recipients on research proposals. Entities located outside of California and for-profit businesses are eligible to serve as sub-recipients for proposed research.

B. ELIGIBLE PROJECTS

Eligible research projects will focus on one or more of the SGC Climate Change Research Program's research priorities and advance all seven program goals; facilitate the reduction of greenhouse gas emissions in California and benefit low-income or disadvantaged communities; and, include robust, diverse, multi-stakeholder partnerships featuring key stakeholders. Partners may include, but are not limited to, community based organizers, policymakers, and others that can transform research findings into action, and can lead to ongoing collaboration beyond the duration of the grant award. Proposers are competing to receive one of the two project types listed in section III part A, Funding Availability of this document.

As noted in above in Figure 2, Project Types two types of awards are available to researchers ranging from $100,000 to $4 million to support up to fifteen Research Proposals.

C. ELIGIBLE COSTS

Administrative and direct costs, as described below, are reimbursable costs in this program.

1) Administrative costs that directly apply to the accomplishment of a project or partnership may account for up to five (5) percent of the awarded funds. "Administration of the grant" may include, but is not limited to activities required for processing the Grant Recipient/Partner costs, reporting, invoicing, etc. Administrative costs generally pertain to payment for staff that provide financial or administrative support that is specific to the project. Research management duties (such as project coordination, reporting, etc.) are part of the research scope, and not considered administrative costs. Administrative costs may include, but are not limited to: staff salaries and benefits, supplies, and other resources used to administer the grant. This definition supersedes any definition of administrative costs provided by other California Climate Investment programs.

2) <u>Direct costs</u> defined as costs directly tied to the implementation of an awarded research project are reimbursable costs, with the exception of equipment[8] purchases. These costs will vary depending on the project, but include the salaries and fringe benefits of project staff, partners and sub-recipients; travel, materials, supplies and miscellaneous costs that are attributed to the project.

3) <u>Indirect costs</u> that comply with the program's Research Investment Plan are reimbursable. Specifically, a maximum indirect cost rate of 25% was established for the Climate Research Program. Indirect cost rates may vary under these circumstances. Please note: cost effectiveness is one of the determinants for project awards.

   – **University of California and California State University** proposals can apply a negotiated rate that is lower than the maximum rate, if an agreement to apply that rate has been reached with a state agency or department.

   – **Federally Funded National Lab** proposals can use a higher rate, as negotiated with the California Department of General Services in compliance with public resources code 12500-02 or a previously established rate agreement with a State agency or department.

   – **Private Universities** may charge a negotiated rate other than the maximum rate listed to its research proposals if that rate agreement was previously established with a State agency or department is in place.

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[8] Equipment is defined as an article or physical resource used to implement an operation or activity with a normal life expectancy of one year or more and an approximate unit price of $5,000 or more.

<center>V.   PROPOSAL ORGANIZATION AND SUBMISSION INSTRUCTIONS</center>

A.   RESEARCH PROPOSAL SUBMISSION FORMAT AND PAGE LIMITS

The following table summarizes formatting and page limit requirements:

Figure 3: Submission Formatting

FORMAT	Font: 11-point, Arial (excluding Excel spreadsheets, original template headers and footers, and commitment or support letters).
	Margins: No less than one inch on all sides (excluding headers and footers).
	Spacing: Single spaced, with a blank line between each paragraph.
	Pages: Numbered and printed double-sided (when determining page limits, each printed side of a page counts as one page).
	Signatures: Manual (i.e., not electronic).
	File Format: MS Word version 2007 or later (.doc or .docx format) or PDF files, excluding Excel spreadsheets and commitment or support letters.
	File Storage: Electronic files of the research proposal submission package must be submitted as part of the GRanTS web-based grant application submission tool.
PAGE LIMITS	Title Page: up to two pages.
	Project Narrative: ten pages, including figures, tables, graphics and charts (Attachment 4).
	Biographical Sketch: up to two pages each, for key personnel working on the project.
	<mark>Collaborations and Affiliations</mark>
	Partnership Overview: up to ten organizations
	Letters of Support: one page for each reference, maximum of seven letters
	<mark>Summary of Prior Research Funded by the State: past projects managed by proposal's PI(s) within the past three years</mark>
	<mark>Quality Assurance Statement</mark>
	References and Literature Citations: two pages
	There are no page limits for the following items:
	− Submission Questionnaire (Attachment 1)
	− Budget Forms (Attachment 2)
	− Scope of Work (see Attachment 3)

B.   METHOD FOR DELIVERY

The method of delivery for responding to this solicitation is through the Department of Water Resources' Grants Review and Tracking System (GRanTS), a web-based grants application tool, available at: https://www.water.ca.gov/Work-With-Us/Grants-And-Loans/GRanTS/. This online tool allows proposers to submit their electronic documents to the SGC prior to the date and time specified in this solicitation. Electronic files must be in Microsoft Word XP (.pdf format) and Excel Office Suite formats unless originally provided in the solicitation in another format. Attachments requiring signatures may be scanned and submitted in PDF format. Completed

Budget Forms, Attachment 2, must be in Excel format. The system will not allow users to submit a research proposal after the due date and time.

First-time users must register as a new user to access the system. Proposers will receive an email after documents have been submitted and received by the SGC. This email indicates that the SGC has received something from the proposer and is NOT a confirmation that all submitted or required documents were received. The proposer is solely responsible for ensuring all required documents are received by the SGC. A tutorial of the system is available online, and the system will be reviewed at the Pre-Submission Research Proposal Workshop, which will be recorded and made available on the SGC website. The SGC staff person identified in section II, part H, Questions, of the solicitation is available to provide additional assistance.

C. RESEARCH PROPOSAL SUBMISSION ORGANIZATION AND CONTENT

Below is a description of each required section of the submission package. Completeness in submitting all the information required in each attachment will be factored into the scoring. Submitted research proposals do not need to adhere strictly to the suggested format for each of the package components to the templates or directions provided. The SGC encourages flexibility in the proposal development, if it helps the proposer to better articulate the goals and objectives of the proposed research.

1. **Submission Questionnaire (Attachment 1)**

   This web-based online form requests basic information about the proposer and the project, and includes a number of questions about the submission. The Research Proposal includes an original form that includes all requested information.

2. **Project Budget (Attachment 2)**

   The budget forms are in MS Excel format, available for download on the GRanTS web portal. Complete and submit information on all pertinent budget worksheets. The salaries, rates, and other costs entered on the worksheets will become a part of the final agreement. The template is optional. Lead applicants are allowed to use internal templates as long as they provide all of the required information.

   – All project expenditures must be made within the approved agreement term. The entire term of the agreement and projected rate increases must be considered when preparing the budget.

   – The budget must reflect estimates for actual costs to be incurred during the agreement term. The SGC may only approve and reimburse for actual costs that are properly documented in accordance with the grant terms and conditions. Rates and personnel shown must reflect the rates and personnel the proposer would include if selected as a Grant Recipient.

   – The proposed rates are considered capped and may not change during the agreement term. The Grant Recipient will only be reimbursed for actual rates up to the rate caps.

   – The budget must NOT include any Grant Recipient profit from the proposed project, either as a reimbursed item, match share, or as part of overhead or general and administrative expenses (subcontractor profit is allowable, though the maximum percentage allowed is ten percent of the total subcontractor rates for labor, and other direct and indirect costs as indicated in the Category Budget form). Please review the terms and conditions and budget forms for additional restrictions and requirements.

– The budget must allow for the expenses of all meetings and products described in the Scope of Work. Meetings may be conducted at the SGC's offices or by conference call, as determined by the SGC Agreement Manager.

– Equipment purchases are not an allowable expense under this program.

– Proposers must budget for open access publishing for all of the published materials that report on this research.

– The budget must NOT include program funds spent outside of the United States or for out of country travel.

3. Scope of Work ([Attachment 3]({.underline}))

Proposers must include a completed Scope of Work. The Scope of Work identifies the tasks required to complete the project. It includes a project schedule that lists all products, meetings, and due dates. This should include a milestone/outcomes chart that measures results featuring technology transfer, research, outreach, and other specific milestones; as well as outcomes and benefits that will derive from conducting the research. All work must be scheduled for completion by March 31, 2021.

4. Title Page

The title page must include:

– The Principal Investigator's last name [hyphen] a brief (one sentence) project description;

– Name, affiliation, and contact information (address, telephone, email) for each of the proposal's investigators

– Requested budget amount

– Proposed period for conducting research (start date/end date)

– Principal Investigator's signature line (including printed/typed name and date)

5. Project Narrative ([Attachment 4]({.underline}))

This narrative should detail the proposer's plan and approach to conducting research that will advance one or more of the 2018 Research Priorities listed the Research Investment Plan (see Appendix C). The project narrative must include the three main elements (Description, Research Merits, and Meaningful Engagement) identified in Attachment 4. Additionally, the narrative should address, applicable subjects and themes (with clear headings), such as:

– Research Objectives

– Research Question(s) and Hypothesis(es)

– Research Approach and Methods

– Anticipated Policy Implications

Additionally, the narrative should incorporate how the proposed research addresses the elements described in the solicitation's Evaluation Criteria (section VI) for the following two elements:

– Research merits

– Meaningful engagement

6. **Biographical Sketches**

   Clearly describe the research interests and expertise of key personnel and their affiliated research institution(s). Include the information required for each individual, as described below (maximum two pages, printed double-sided).

   Senior Personnel **-** A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. The following information must be provided in the order and format specified below.

   – *Professional Preparation*: a list of the individual's undergraduate and graduate education and postdoctoral training

   – *Appointments*: a list, in reverse chronological order, of all the individual's academic/professional appointments beginning with the current appointment.

   – *Publications*: a list of: (i) up to 5 publications most closely related to the proposed project; and (ii) up to 5 other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified. For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included. Only the list of 10 will be used in the review of the proposal.

   – *Synergistic Activities*: a list of up to five examples that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

   – *Collaborators & Other Affiliations*: Collaborators and Co-Editors. A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of the proposal. Also include those individuals who are currently or have been co-editors of a journal, compendium, or conference proceedings during the 24 months preceding the submission of the proposal. If there are no collaborators or co-editors to report, this should be so indicated. This information can be moved from the individual biographical sketches and compiled into one separate document that provides all affiliate information for all senior personnel.

   Other Personnel - include information on exceptional qualifications that merit consideration in the evaluation of the proposal.

7. **Partnership Overview (for Partnership Submissions)**
    Identify by name all personnel assigned to the project, including the project manager and/or principal investigator, and individuals employed by a proposed partner or sub-recipient that is listed in the project budget. Clearly describe their individual areas of responsibility and the roles of each partner through the different phases/tasks of the proposed research. Additionally, this document should include name of the contact person for each of the other institutions or organizations contributing to the project (non-paid committees, advisors, organizers, etc.).

8. **Letters of Support**
    All proposers must include at least one support letter from a project stakeholder (i.e., an entity or individual that will benefit from or be involved in the research). In the letter the stakeholder(s) should (1) describe their interest or involvement in the project; (2) indicate the extent to which the project has the support of the relevant industry, community and/or organizations; (3) describe how they intend to support or contribute to the project; and, (4) if applicable, indicate how the research could result in benefits to a low-income or disadvantaged community.

9. **Summary of Prior Research Funded by the State**
    Provide a list of past projects that includes the following information for each research project listed: project title, project status, the project's PI(s), the sponsoring research institution, contract number, and the name and contact information for the State's Agreement Manager.

10. **References and Literature Citations (Optional)**
    Proposals can include a separate bibliography of references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Only bibliographic citations should be included. This document should follow scholarly practices when citing source materials relied upon when preparing the research proposal.

11. **Quality Assurance Statements (Optional) (Attachment 5)**
    The QAS is required when research involves data collection or processing, conducting surveys, modeling, method development, or the development of tools or technology. The QAS outlines how internal processes are in place to ensure that research products satisfy the intended research objectives. Researchers may substitute a QAS with a lab or institution's Plan for data management or with a relevant NSF Data Management Plan.

D. ANTICIPATED ANNOUNCEMENT AND AWARD DATES

Final funding decisions will be made based on the results of the external expert review, the programmatic review, and the approval of the Council during a public meeting. As noted in the selection factors section above, in making the final funding decisions the SGC executive and key staff may also consider program balance and available funds.

Should a proposal be recommended to the Council for award, the Principal Investigator might be contacted by SGC staff for assistance in preparing the public award abstract and its title describing the project and justifying the expenditure of California Climate Investment Program funds. Project award abstracts must articulate how the project facilitates the reduction of greenhouse gas emissions, has a clear and demonstrated connection to the State's climate change goals, demonstrates a direct connection to enabling climate actions and, if applicable, benefits communities identified as low-income or disadvantaged as noted in Appendix A, Key Terms/Words.

An award recommendation by the SGC staff does not constitute approval or obligation of funds. Proposers are cautioned that commitments, obligations or awards can only be made by a majority vote of the Council. No commitment on the part of the SGC or the State of California should be inferred from technical or budgetary discussions with SGC staff. A PI or organization that makes financial or personnel commitments in the absence of a signed grant or cooperative agreement does so at its own risk.

Research project grant agreements may be forwarded to the Air Resources Board's California Climate Investment Program's Grant Agreement Management Division, and to the Department of General Services for review and approval in accordance with the State of California procedures.

VI.   EVALUATION AND REVIEW PROCESS

A.   RESEARCH PROPOSAL EVALUATION

Proposals will be evaluated and scored based on responses to the information requested in this solicitation. To evaluate submissions, the SGC will organize an Advisory Committee consisting of external panelists selected for disciplinary expertise and a State Interagency Committee consisting of representatives from state agencies and departments. Each proposal is considered on its own merits without regard for institutional affiliation. Ranking is based on the project's Merit Review and Programmatic Review.

Note: Research proposers will not be reimbursed for time spent answering clarifying questions throughout the evaluation process.

B.   INTAKE AND SCREENING

SGC staff will screen submission packages for compliance with the screening criteria in part E of this section (Submission Screening Criteria). Submissions that fail any of the screening criteria will be rejected. SGC staff may conduct optional in-person or telephone Clarification Interviews with proposers during the screening process to clarify and/or verify information submitted in the Research Proposal Submission Package. However, these interviews may not be used to change or add to the content of the original submission.

C.   MERIT REVIEW OF PROPOSED RESEARCH

Research proposals that successfully pass the screening process will be submitted to the program's Advisory Committee for review and scoring based on the scoring criteria specified in part F of this section (Merit Review Evaluation Criteria). Appropriate expert reviewers will review research proposals based on the criteria and process described in this section. This review process is designed to evaluate the scientific and community engagement merits of each submission.

The Advisory Committee will be comprised of an interdisciplinary external assembly of academic and technical experts representing the physical and social sciences, including climate and environmental scientists, engineers, planning and environmental justice scholars, public health practitioners, social scientists, and/or economists who are accomplished in their respective disciplines and proficient in the technical subjects they are reviewing. Additionally, the committee will include members with expertise that advance the goals of this program concerning meaningful community engagement and equity integration.

Evaluation Criteria: The Advisory Committee will evaluate each submission based on the extent to which the proposal demonstrates its scientific merit as identified in the program's Research Investment Plan. Specifically in the area of research merits (comprises 65 percent of the merit review score), and meaningful engagement (comprises 35 percent of the merit review score).

The Advisory Committee will assign a rating reflecting its evaluation for the research merits and meaningful engagement of each submission using a scoring rate of excellent, very good, good, fair, or poor. A final, cumulative rating for each research proposal will be used to determine which submissions undergo an internal programmatic review. Research proposals that receive a fair or poor rating will not continue to the next stage of the review process. SGC staff may arrange a telephone interview with research proposers during the merit review evaluation process to assist the Advisory Committee with clarification and/or verification of information submitted in the proposal. However, these interviews may not be used to change or add to the content of the original submission.

D. PROGRAMMATIC REVIEW OF PROPOSED RESEARCH

Proposals receiving final ratings of excellent to good from the Advisory Committee will move on to a review of additional criteria, specifically regarding the institution's past performance, project management capacity and policy considerations listed in part G of this section. The purpose of the programmatic review is to ensure an integrated research program portfolio and determine which submissions to recommend for award. In conducting the programmatic review, a State Interagency Committee will consider information provided by the research proposer and may consider information from other sources, including prior and current grantor and agency files**.**

E. SUBMISSION SCREENING CRITERIA

Figure 4: Screening Criteria

SCREENING CRITERIA *Research Proposal Submission Packages must pass ALL criteria to progress to Stage Two.*	Yes/No
1. The Research Proposal Submission package is received by the SGC through the **GRanTS** web-based online application system by the due date and time specified in the "Key Activities Schedule" (Figure 1 of this solicitation).	☐ Yes ☐ No
2. The submission's Title Page includes the signature of the Principal Investigator.	☐ Yes ☐ No
3. The submission demonstrates how the proposed research will facilitate the reduction of greenhouse gas emissions in California.	☐ Yes ☐ No
4. The submission discusses how the research will benefit low-income or disadvantaged communities.	☐ Yes ☐ No

F. MERIT REVIEW EVALUATION CRITERIA

Proposals that pass all of the Screening Criteria will be evaluated based on the Merit Review Criteria (Figure 6) using the Scoring Scale identified below (Figure 5). Each criterion has an assigned percentage, and is divided into multiple sub-criteria. The sub-criteria are not equally weighted. The Project Narrative (Attachment 4) must respond to each sub-criterion, unless otherwise indicated.

Scoring Scale

Figure 5: Merit Review Scoring Scale

Scale	Explanation for Ranking
Poor	− The response does not adequately address the criteria. − There are one or more omissions, flaws, or defects or the criteria are addressed in a limited way that results in a low degree of confidence in the proposed solution.
Fair	− The response adequately addresses the criteria. − Any omissions, flaws, or defects are inconsequential and acceptable.
Good	− The response fully addresses the criteria with a good degree of confidence in the proposer's response or proposed solution. − There are no identified omissions, flaws, or defects. Any identified weaknesses are minimal, inconsequential, and acceptable.

Very Good	– The response fully addresses the criteria with a high degree of confidence in the proposer's response or proposed solution.
	– The proposer offers one or more enhancing features, methods, or approaches that exceed basic expectations.
Excellent	– All criteria are addressed with the highest degree of confidence in the proposer's response or proposed solution.
	– The response exceeds the requirements in providing multiple enhancing features, a creative approach, or an exceptional solution.

G. TECHNICAL MERIT EVALUATION CRITERIA

The Project Narrative (Attachment 4) must respond to each criterion below, unless otherwise indicated. The responses must directly relate to the solicitation requirements and focus as stated in section I part A, Purpose of the Solicitation and section II part B, Program Goals. Failure to comply with the solicitation could be grounds for rejection of a research proposal as stated in section VII part C, Grounds to Reject a Research Proposal.

Figure 6: Technical Merit Criteria

Scoring Criteria	Scoring Weight
1. Research Merits	**65%**
a) The degree to which the proposed research advances achievement towards the State's climate goals. And the degree to which the proposed activities address an important issue, problem or opportunity that advances policy design, implementation, or evaluation to meet these goals.	
b) The degree to which the submission demonstrates that the proposed research will advance the state of the science or discipline within a research priority area through use of state-of-the-art methods. And the degree to which the submission demonstrates that the project (and its approach) is defensible and technically feasible, and uses appropriate and adequate research methods.	
c) The degree to which new approaches to solving problems and exploiting opportunities related to climate will be employed; alternatively, the degree to which the activity will focus on important or potentially important ecosystem problems, resources and issues. And, the degree to which the submission demonstrates that the research will challenge and seek to shift current research or engineering paradigms by using innovative theoretical concepts, approaches or methodologies, instrumentation or interventions applicable to one or more fields of research.	
d) The degree to which the proposed research will contribute to reaching the goals of the Climate Change Research Program as described in the 2018 Research Investment Plan, and the degree to which the proposed activity addresses the needs of important state, regional or community constituencies.	

Scoring Criteria	Scoring Weight
e) The degree to which users or potential users of the results of the proposed research have been brought into the planning of the activity will be brought into the execution of the activity or will be kept apprised of progress and results. And, the degree to which the proposed research demonstrates that the project results will produce benefits to the public (such as improvements to the environment or human health) and will be disseminated to enhance scientific and technological understanding. f) The degree to which investigators are qualified by education, training and/or experience to execute the proposed activity. Evidence of any record of achievement with previous funding.	
2. Meaningful Engagement a) The degree to which the submission demonstrates how the research engages with the research community, community-based organizations and other stakeholders at all stages of the program to ensure relevance and utility of research process, projects, and results. And, the extent to which the submission demonstrates that the research will address a need identified by the community of focus. b) The degree to which the submission describes how it will successfully build relationships with new partners that results in opportunities for input and feedback on the project's design and approach through delivery mechanisms and communication processes used to disseminate research findings, data, and recommendations. And, the extent to which the researchers directly involve the community in their research using methods such as, Community Based Participatory Research and community monitoring/data gathering. c) The degree to which the submission provides assistance and shares resources with others to advance the climate goals of engaged audiences. d) The degree to which the submission establishes multi-stakeholder or multi-institutional partnerships organized into a collaborative structure that will advise and oversee the project's progress, stakeholder rapport, and application of research findings/results.	**35%**

H. PROGRAMMATIC REVIEW RANKING CRITERIA

This review ensures that the SGC achieves its goal to invest in cross-cutting research that builds community resilience, integrates land use and development considerations, and facilitates the transformation of California communities through outcome-based research. A State Interagency Committee organized by the SGC will review the Advisory Committee scores and institute a final ranking using the information provided in the solicitation, considering information from other sources, including prior and current grantors and agency files.

Figure 7: Programmatic Review Criteria

Ranking Criteria
1. <u>Project Management</u> (sub-criteria are equally weighted):

Ranking Criteria

a) **Management**: The degree to which the submission demonstrates that the project will be adequately managed to ensure the timely and successful achievement of objectives using appropriate project schedules and milestones. And the degree to which the submission demonstrates the proposer will adequately track and measure progress toward achieving expected results (outputs and outcomes).

b) **Quality Assurance**: The degree to which the submission includes an appropriate and adequate Quality Assurance Statement (see Attachment 5).

c) **Resources and Cost Controls**: The degree to which the submission demonstrates that the facilities, equipment, and budget are appropriate, adequate, and available. And the degree to which the submission demonstrates that well-defined and acceptable approaches, procedures, and controls are used to ensure timely and efficient expenditure of awarded grant funds.

2. Past Performance and Reporting History. Staff will review information related to the proposed Lead PI's Past Performance and Reporting History under prior state agency agreements (including interagency agreements, grants and cooperative agreements) for performance initiated within the last three years (of similar in size and scope to the proposed project) in terms of:

i.   **Level of success** in managing and completing each agreement.

ii. **History of meeting the reporting requirements** under each agreement.

3. Policy Considerations (Weights for each of the sub-criteria will be included in the Grant Solicitation): The degree to which it is deemed that the submission should be selected out-of-rank based upon one or more of the following factors, thereby awarding a project that may not necessarily have received the highest merit review score.

i.   **Availability of funding**

ii. **Balance and distribution of funds**:
   – Geographically
   – By type of institutions
   – By type of partners
   – By research areas
   – By project types
   – By cost effectiveness
   – By climate theme

iii. **Duplication of other projects** funded or considered for funding by the SGC or other State agencies

iv. **Proposer's prior award performance**

v.   **Partnerships** and/or participation of targeted groups

vi. **Adequacy of information** necessary for SGC staff to make a determination and draft necessary documentation before recommendations for funding are made to the Council

vii. **Cost effectiveness**

VII. AWARD AND ADMINISTRATION INFORMATION

A. AGREEMENTS

Research Proposals approved for funding by the Council will be developed into a grant agreement. Researchers may begin the project only after full execution of the grant agreement, signed by the research institution and the SGC.

- **Agreement Development:** SGC staff will send the research institution a grant agreement for approval and signature. The agreement will include the applicable terms and conditions and will incorporate this solicitation by reference. The SGC reserves the right to modify the award documents (including the terms and conditions) prior to executing any agreement.
- **Failure to Execute an Agreement:** If the SGC is unable to successfully execute an agreement with a Research Institution, it reserves the right to cancel the pending award and to fund an eligible Research Proposal.
- **Agreement Amendment:** The executed agreement may be amended by mutual consent of the SGC and the research institution. The agreement may require an amendment as a result of project review, changes in project scope, and/or availability of funding.

B. RANKING, NOTICE OF RECOMMENDED RESEARCH AWARDS AND AGREEMENT DEVELOPMENT

Ranking and List of Recommended Research Awards: For Research Proposals that are recommended to receive funding, SGC will post a list of recommended awards that includes: (1) the recommended funding amount; (2) the rank order of proposers; and (3) the amount of each proposed award. The SGC will post this list on its website. The members of the Council must vote to award funds to a recommended research project at a publically noticed meeting in order for that project to receive funding.

Debriefings**:** Proposers that do not receive a Grant Award may request a debriefing after the Council votes to approve the awards by contacting the SGC staff person listed in section II part H, Questions. A request for debriefing must be received **no later than 30 calendar days** after the Council has approved awards.

The SGC reserves the right to allocate any additional funds to passing Research Proposals; and to negotiate with successful proposers to modify the project's scope, schedule, and/or level of funding.

C. GROUNDS TO REJECT A RESEARCH PROPOSAL OR CANCEL AN AWARD

Research Proposals that do not pass the screening stage will be rejected. In addition, the SGC reserves the right to reject a submission and/or to cancel an award if the following circumstances are discovered at any time during the review or agreement process:

- The submission contains false or intentionally misleading statements or references that do not support an attribute or condition contended by the proposer.
- The submission is intended to erroneously and fallaciously mislead the State in its evaluation and the attribute, condition, or capability is a requirement of this solicitation.
- The submission does not literally comply or contains caveats that conflict with the solicitation, and the variation or deviation is material.
- The submission does not contain sufficient information to enable a useful evaluation to be conducted.
- The submission has received unsatisfactory evaluations from the SGC or another California state agency.
- The Research Proposal is not submitted in the format specified in sections III through VI of the solicitation.

- The project end date extends past the anticipated agreement end date specified in the "Key Activities Schedule" (Figure 1 of this solicitation).

- The Research Institution included a statement or otherwise indicated that it will not accept the terms and conditions or that acceptance is based on modifications to the terms and conditions.

- The Research Proposal contains confidential information or identifies portion(s) of the proposal as confidential.

D. MISCELLANEOUS

Solicitation Cancellation and Amendment: It is the policy of the SGC not to release a solicitation unless and until there is a bona fide intention to award an agreement. However, if it is in the State's best interest, the SGC reserves the right to do any of the following:

- Cancel this solicitation;

- Revise the amount of funds available under this solicitation;

- Amend this solicitation as needed; and/or

- Reject any or all Research Proposals received in response to this solicitation.

If the solicitation is amended, the SGC will send an addendum to all parties who requested the solicitation, and will also post it on the SGC's website at: http://sgc.ca.gov/programs/climate-research/. The SGC will not reimburse the proposer for submission development expenses under any circumstances, including cancellation of the solicitation.

Modification or Withdrawal of Research Proposal Submission Package: Proposers may withdraw or modify a submission package before the deadline to submit by sending a letter to the SGC staff identified in section II part G, Questions of this solicitation. Research Proposals cannot be changed after that date and time. A submission cannot be "timed" to expire on a specific date. For example, a statement such as the following is non-responsive to the solicitation: "This Research Proposal and the cost estimate are valid for 60 days."

Confidentiality: Though the entire evaluation process from receipt of Research Proposal Submission Package up until the SGC staff posts the list of recommended awards is confidential, **all submitted documents will become public records** after the SGC posts this list or the solicitation is cancelled. **The SGC will not accept or retain Research Proposal Submission Packages that identify any portion as confidential.**

Solicitation Errors: If a proposer discovers any ambiguity, conflict, discrepancy, omission, or other error in the solicitation, the proposer should immediately notify the SGC of the error in writing and request modification or clarification of the solicitation. The SGC will provide modifications or clarifications by written notice to all parties who requested the solicitation, without divulging the source of the request for clarification. The SGC is not responsible for failure to correct errors.

Immaterial Defect: The SGC may waive any immaterial defect or deviation contained in a Research Proposal. This waiver will not modify the submission or excuse the successful research proposer t from full compliance with solicitation requirements.

Disposition of Proposer's Document: Upon the posting of the recommended list of awards, all research proposals and related materials submitted in response to this solicitation will become property of the State and public records. Unsuccessful proposers who seek the return of any materials must make this request to the SGC staff listed in this solicitation.

E. AWARD NOTICES

Researchers will be notified if a research proposal is being recommended for funding as part of the SGC staff report containing research project recommendations, which will be posted online on July 20, 2018. This notification is not an authorization to begin performance of the project.

F. COMMUNICATIONS

Branding: Grant Recipients are required to use the SGC and CCI names and/or logos for all published materials related to the research funded through this program. All press releases, fact sheets, talking points and press interviews related to this research must include the phrase "administered by the Strategic Growth Council and funded through the California Climate Investments," and logos should be included where applicable.

Media: Grant Recipients are required to identify a point of contact for all press inquiries and communications needs related to the project and provide the name, phone number and email address of this individual to the SGC.

Research Brief: Grant Recipients are required to prepare a two-page summary of the selected proposal, corresponding to the template provided by the SGC to be displayed on the SGC's website and used for other communications purposes.

G. PUBLIC ACCESS TO SGC FUNDED RESEARCH

SGC will require all Climate Change Research Program funded research to provide free and open access to final manuscripts of scholarly articles, reports, and other products produced entirely or primarily with program funding. These and additional published materials will be required to be submitted to Integrated Climate Adaptation and Resiliency Program's Adaptation Clearinghouse after acceptance, and no later than upon publication. The Governor's Office of Planning and Research shall make all such manuscripts publicly available through the Clearinghouse within one year of publication by the journal. Proposed research budgets are encouraged to include funding for disseminating research results and findings through an open-access publishing platform.

H. GRANT RECIPIENT ORIENTATION MEETING

Research proposals selected for funding are required to participate in a Grant Recipient orientation meeting after the grant agreement is executed. This meeting is an opportunity to review the terms of the grant agreement; learn about expectations related to documentation and allowable costs rules that lead institutions, partners and sub-recipients must adhere to, and; to make any final refinements to the grant's work plan, schedule and budget. Specifically, SGC administrative and program staff will review:

1) Overall work plan, timeline, and budget;
2) Collaborative Structure of partners and sub-recipients being funded through the program, and Memorandum of Understanding;
3) Community engagement activities;
4) Eligible costs to be funded by the state, and any additional ineligible costs that will be funded by the Grant Recipients or partners;
5) Project accounting of funds;
6) Reporting process, including frequency and information; and
7) Project review and performance/non-performance corrective action.
8) Additional necessary project information or supporting documentation

I.   ADMINISTRATIVE AND GRANT AGREEMENT REQUIREMENTS

Grant Agreements will be executed between the State of California (State) and the Lead Research Institution only. The Lead Research Institution is referred to as the "Grant Recipient" and Sub-Recipients will be referred to as "Partners". Diagram 2 illustrates the relationship between the Grant Recipient and Partners.

DIAGRAM 1: Grant Recipient/Partner Relationship
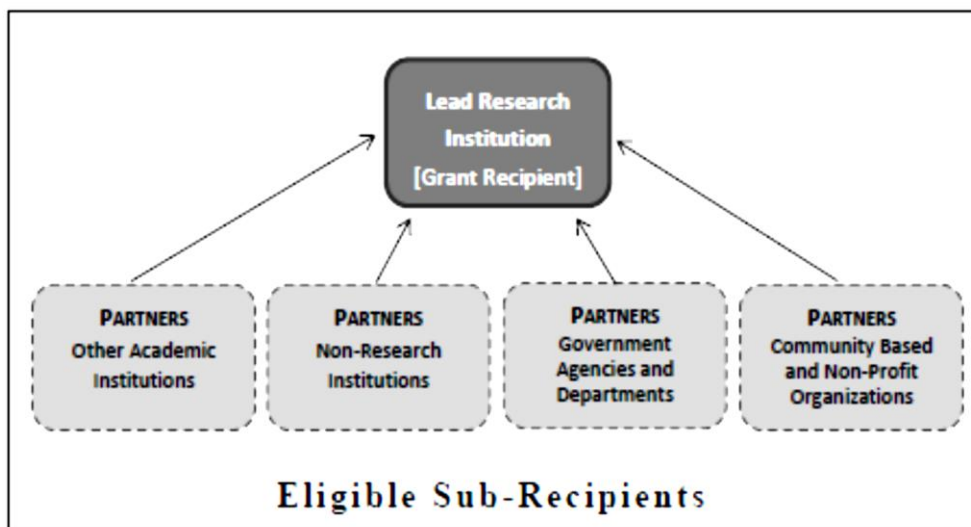
The Grant Recipient will be responsible for compiling and submitting all invoices and reporting documents for themselves and all Partners. Upon receipt of appropriate documentation, Research funds will be paid to the Grant Recipient, which will be responsible for dispersing payment to Partners, as approved by the State.

1)   Grant Agreement Execution and Term

   a.   Grant Agreement Execution

      i)   The Grant Recipient will be notified by the State if they have been selected for a Research Grant award.

      ii)   After Grant Recipient selection, the Grant Recipients, Partners, and State will engage in a Pre-Grant Agreement Consultation phase to finalize the agreement. The State will assist the Grant Recipient and Partners to refine the agreement and all accompanying attachments to comply with all administrative, statutory, and Climate Change Research Program requirements.

      iii)   After the grant agreement and attachments have been finalized, the Grant will follow provided instructions for signing all required documents. The Grant Recipient must submit all supporting materials and a signed agreement within the timeline provided in the instructions or risk forfeiting the grant award.

   b.   Grant Agreement Term

      i)   The grant agreement term begins on the day the State and the Grant Recipient have both signed the completed agreement. The State will notify the Grant Recipient and Partners when work may proceed.

ii) The end of the grant agreement term will be determined by the State based on the availability of funds and the administrative requirements for liquidation. The agreement term is approximately three years from the date of proposal selection, unless extended.

2) Payment and Accounting of Grant Funds

a. Grant funds cannot be disbursed until the grant has been fully executed.

b. Only approved and eligible costs incurred during the grant term will be reimbursable.

c. On a quarterly basis, the Grant Recipient will submit project invoices to the SGC.

d. Before submitting to the SGC, the Grant Recipient will be responsible for compiling all supporting documentation from Partners for a specific time-period. Invoices without adequate supporting documentation for all costs will not be paid.

e. Supporting documentation may include, but is not limited to: purchase orders, receipts, progress payments, subcontractor invoices, time cards, etc.

f. Each invoice must be accompanied by appropriate quarterly reporting materials.

g. Payments are made on a reimbursement basis; advance payments are not allowed. The Grant Recipient and Partners must have adequate cash flow to pay all grant-related expenses prior to requesting reimbursement from the SGC.

h. The disbursement process and acceptable forms of supporting documentation will be finalized during the Pre-contract Consultation.

Per State of California policy, the SGC will withhold ten percent of all direct costs from each task to be reimbursed with Climate Change Research Program funds until the task is completed and deliverables are received by the SGC. Indirect costs will be reimbursable, only if they comply with the direction provided in the program's Research Investment Plan. Refer to the definitions listed in section IV part C, Eligible Costs.

J.   REPORTING, REVIEW AND PERFORMANCE

1) Reporting Requirements

The Grant Recipient will be subject to the following reporting requirements:

a. <u>California Air Resources Board</u>: The Grant Recipients must adhere to the reporting requirements outlined by CARB in the Funding Guidelines to Agencies that Administer California Climate Investments.[9] .

Note: Proposers should be aware that CARB is currently updating the Funding Guidelines and there may be changes to reporting requirements in the future.

b. <u>Progress Reports</u>: The Grant Recipient must provide regular progress reports regarding the implementation of the approved research plan. Reporting will include, but is not limited to:

i) *Quarterly progress updates*. A template format that allows the Grant Recipient to report on the percentage of work completed and the percentage of budget spent in relation to the approved research plan and budget. Additionally, requests information about any project challenges, opportunities or news occurring within a specific time period.

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[9] Funding Guidelines for Administering Agencies. California Air Resources Board.
https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/fundingguidelines.htm

ii) *Annual progress reports.* The Grant Recipient is responsible to submit an annual narrative that features an in-depth discussion detailing how the research is advancing the program objectives:

- facilitating greenhouse gas emissions reductions in California
- building innovative, outcome-driven partnerships with State agencies, local and regional communities, organizations within disadvantaged and low-income communities, and/or key stakeholders
- delivering major economic, environmental, or public health benefits for Californians, including meaningful benefits to the most disadvantaged and low-income communities

iii) *A final report*. Summarizing key findings, accomplishments and deliverables completed during the grant term.

All data and reports must be presented to the SGC in a format that can be posted to program website and data tools. Reporting templates will be finalized prior to executing the grant agreement.

2) Review and Performance

a. Review and Audit Procedures

The State has the right to review project records, conduct audits, and perform site visits during the project implementation periods. This right shall extend to all Partners and subcontractors, and the Grant Recipient shall include provisions ensuring such access in all contracts or subcontracts.

The Grant Recipient must have the proposal records, including the source documents and evidence of payment, readily available, and provide an employee with knowledge of the project to assist the auditor.

Grant Recipients need to maintain copies of project records for at least three (3) years after the "Project Closeout" report or final "report is submitted.

b. Accounting Requirements

The Grant Recipient must maintain an accounting system that:

i) Accurately reflects fiscal transactions, with the necessary controls and safeguards;

ii) Provides a good audit trail, including original source documents such as purchase orders, receipts, progress payments, invoices, time cards, canceled checks, etc.; and

iii) Provides accounting data so the total cost of each individual proposal can be readily determined.

c. Remedies for Non-Performance

The State has the discretion to determine if the Grant Recipient or Partners have performed in accordance with program requirements, the grant agreement, or any other legally binding agreements. Examples of non-performance include, but are not limited to: misuse of funding for ineligible expenses, failure to comply with program guidelines or requirements, inability to meet performance requirements or schedule milestones, and failure to comply with the terms and conditions identified in legal agreements governing the grant award.

If the State determines that the Grant Recipient or Partners have not performed in accordance with program requirements, the grant agreement, or any other legally binding agreements governing the grant award, the Grant Recipient will be notified and provided instructions and a timeline to rectify all cases of non-performance. The State may withhold any payments due the Grant Recipient until the Grant Recipient brings the project back into full compliance. Should the Grant Recipient or Partners fail to come back into compliance, the State may terminate the grant agreement or any other legally binding agreement governing the grant award at any time upon 30 days of written notice to the Grant Recipient.

i) After the grant agreement and attachments have been finalized, the Grant Recipient will follow provided instructions for signing all required documents. The Grant Recipient must submit all supporting materials and a signed grant agreement within the timeline provided in the instructions or risk forfeiting the grant award.

ii) The grant term begins on the day the SGC and the Grant Recipient have both signed the completed grant agreement. The SGC will notify the Grant Recipient and Partners when work may proceed.

iii) The end of the grant term will be determined by the State based on the availability of grant funds and the administrative requirements for liquidation. The anticipated grant term is approximately three years, unless extended.

K. RECORDS RETENTION

Proposal records must be retained for a period of three (3) years after final payment is made by the State. All proposal records must be retained by the Grant Recipient at least one (1) year following an audit. Grant Recipients are required to keep source documents for all expenditures related to each grant for at least three (3) years following proposal completion and one year following an audit. A proposal is considered complete upon receipt of final grant payment from the State.

L. TERMS AND CONDITIONS

Each grant agreement resulting from this solicitation will include terms and conditions that set forth the recipient's rights and responsibilities. By signing the Submission Questionnaire (Attachment 1), each proposer agrees to enter into an agreement with the SGC to conduct the proposed project according to the terms and conditions that correspond to its organization, without negotiation: (1) University of California/California State University terms and conditions; (2) U.S. Department of Energy terms and conditions; or (3) standard terms and conditions. Find more information at http://www.dgs.ca.gov/ols/Resources/StandardContractLanguage.aspx. Failure to agree to the terms and conditions by taking actions such as failing to sign the Submission Questionnaire or indicating that acceptance is based on modification of the terms will result in rejection of the proposal. Proposers must read the terms and conditions carefully. The SGC reserves the right to modify the terms and conditions prior to executing grant agreements.

M. CALIFORNIA SECRETARY OF STATE REGISTRATION

All corporations, limited liability companies (LLCs), limited partnerships (LPs) and limited liability partnerships (LLPs) that conduct intrastate business in California are required to be registered and in good standing with the California Secretary of State prior to its project being recommended for approval at a SGC Public Meeting. If not currently registered with the California Secretary of State, Lead Research Institutions, partners and sub-recipients are encouraged to contact the Secretary of State's Office as soon as possible to avoid potential delays in beginning the proposed project(s) (should the Research Proposal be successful). For more information, contact the Secretary of State's Office via its website at www.sos.ca.gov. Sole proprietors using a fictitious business name must be registered with the appropriate county and provide evidence of registration to the SGC prior to their project being recommended for approval at an SGC Public Meeting.

APPENDIX A: KEY WORDS/TERMS

Word/Term	Definition
Agreement Manager	The State's representative designated by the Strategic Growth Council to oversee the performance of an agreement resulting from this solicitation and to serve as the main point of contact for the Recipient.
CalEnviroScreen[10]	The screening methodology used by all funding awarded through the California Climate Investments to identify California communities that are disproportionately burdened by multiple sources of pollution (classified as a disadvantaged community). The latest available version of the tool at the time of this solicitation is version 3.0.
CBO	Community Based Organizations.
CCI	California Climate Investments, the overarching funding program, administered by the California Air Resources Board, responsible for managing funds allocated from the proceeds of the State's Cap and Trade Auctions.
Cost-reimbursement Award	The type of grant agreement that the State of California executes to fund grant awards. It specifies that the State agrees to reimburse the Grant Recipient for work performed and/or costs incurred by the Grant Recipient up to the total amount specified in the grant. Such costs must be allowable in accordance with the applicable cost principles. Accountability is primarily based on technical progress, financial accounting and fiscal reporting. Except under certain programs and under special circumstances, SGC grants and cooperative agreements are normally cost-reimbursement type awards.
Days	Days refers to calendar days.
Disadvantaged Community	These communities are identified by census tracts that rank high on a combination of metrics gauging pollution burden and vulnerability, as defined and implemented by the latest version of CalEnviroScreen. For more information, see the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act (Health and Safety Code § 39500 – 39944[11].
Grant Agreement	A legal instrument of financial assistance between the State and a Grant Recipient.
Grant Recipient	The recipient of a grant award under this solicitation.
Low-Income Community	As specified in Assembly Bill 1550[3] (2016, Gomez) and codified in the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act (Health and Safety Code § 39500 - 39944[11]: 1) a household income at or below 80 percent of the statewide median income, or 2) a household income at or below the threshold designated as low-income by HCD's list of 2016 State Income Limits Low-income threshold by county and household size are available on ARB's disadvantaged and low-income communities investments web page, https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm

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[10] OEHHA Site for CalEnviroScreen 3.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30
[11]http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article=

Word/Term	Definition
Low Income Households	As specified in Assembly Bill 1550[12] (2016, Gomez), census tracts that are either at or below 80 percent of the statewide median income, or at or below the threshold designated as low-income by the California Department of Housing and Community Development's (HCD) 2016 State Income Limits[13].
Non-traditional Research Partners	Project partners (see below) not affiliated with a research institution. Examples of possible non-traditional research partners include, but are not limited to: Community-based organizations – including civic, community, and advocacy groups; Federal research agencies and departments – such as NOAA, USGS, etc.; Local land use agencies, departments, and organizations; Local health agencies, departments, and organizations; Non-profit organizations – including conservation, environmental justice and natural resources; Open space landowners and recreation providers; Private sector businesses; Regional agencies – focused on transportation, resources, and infrastructure; Regional climate collaboratives, and; Tribes.
Partners	An organization, institution or individual that is associated with the proposed research but not affiliated with the Lead Research Institution. The association can provide complementary expertise and skills to the research, expand collective capacity among stakeholders, and create collaborative knowledge sharing while meeting time, inquiry and funding commitments. Partners can include sub-recipients.
Principal Investigator	The lead researcher designated in the proposal and approved by the Research Institution to conduct the proposed research. This individual is responsible for the scientific or technical direction of the project. SGC does not infer any distinction in scientific stature among multiple PIs, whether referred to as PI or co-PI. If more than one, the first one listed will serve as the contact PI, with whom all communications between SGC staff and the project relating to the scientific, technical, and budgetary aspects of the project should take place. The PI and any identified co-PIs, however, will be jointly responsible for submission of the requisite project reports. In most instances, the Principal Investigator and the Project Manager will be the same person; however, a research proposal may include both roles.
Project Manager	Also known as the Primary Investigator, this person is designated in the proposal submission package to oversee the project and serve as the main point of contact for the Strategic Growth Council.
Project Partner	An entity or individual that contributes to the successful completion of a research grant project. Partners can be a recipient of funding on the project budget.
Proposer	The respondent to this solicitation.
Research Investment Plan	The document that outlines program goals, research priorities, program structure, program review and award process, and other administrative items.
Research Proposal	A proposer's formal written response to this solicitation.

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[12] AB 1550: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1550

[13] HCD - State Income Limits for 2016: http://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/inc2k16.pdf

Word/Term	Definition
SGC	Strategic Growth Council – the administrative and implementing authority for program funds.
Solicitation	This entire document, including all attachments and exhibits ("solicitation" may be used interchangeably with "Grant Funding Opportunity").
State	State of California.
Sub-recipient	A sub-recipient is an additional research department or contractor that is identified in the project proposal as providing a service or product to the completion of the proposed research.

APPENDIX B: APPLICABLE LAWS, POLICIES, AND BACKGROUND DOCUMENTS

Laws/Regulations

– *Assembly Bill 32 (Nunez) - Global Warming Solutions Act of 2006*
AB 32 created a comprehensive program to reduce greenhouse gas (GHG) emissions in California. GHG reduction strategies include a reduction mandate of 1990 levels by 2020 and a cap-and-trade program. AB 32 also required the California Air Resources Board (ARB) to develop a Scoping Plan that describes the approach California will take to reduce GHGs. ARB must update the plan every five years.
Additional information: http://www.arb.ca.gov/cc/ab32/ab32.htm
Applicable Law: California Health and Safety Code §§ 38500 et. seq.

– *Senate Bill 32 (Pavley) - State Targets for Climate Pollution*
SB32 requires the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030
Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

– *Senate Bill 1386 (Wolk) - Resource Conservation: Working and Natural Lands*
SB 1386 establishes State policy making natural and working lands conservation and management a key strategy for meeting the State's greenhouse gas emissions reduction goals, resulting in a variety of outcomes that contribute to carbon sequestration and delivers multiple public benefits. It requires that all state agencies, departments, boards, and commissions consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.
Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1386

– *Assembly Bill 1482 (Gordon) – Climate Adaptation Strategy*
AB 1482 requires the California Natural Resources Agency (CNRA) to update the state's climate adaptation strategy by July 1, 2017, and every 3 years thereafter. As part of the update, the CNRA will coordinate with other state agencies to identify the agency or agencies to lead adaptation efforts in each sector. The updates to the plan are to include climate change vulnerabilities by sector and the priority actions needed to reduce risks, for at least the following sectors: water, energy, transportation, public health, agriculture, emergency services, forestry, biodiversity and habitat, ocean and coastal resources.
Additional information: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB1482

– *Senate Bill 246 (Wieckowski) - Climate Adaptation*
SB 246 establishes an Integrated Climate Adaptation and Resiliency Program for California in the Office of Planning and Research (OPR) to coordinate regional and local efforts with state climate adaptation strategies and to adapt to the impacts of climate change. SB 246 emphasizes climate equity considerations across sectors and regions and strategies that benefit both GHG emissions reductions and adaptation efforts, in order to facilitate the development of holistic, complimentary strategies for adapting to climate change impacts. The bill also requires the Office of Emergency Services, in coordination with the CNRA and OPR, to update the state's Adaptation Planning Guide, "Safeguarding California", to provide tools and guidance to local governments in implementing climate adaptation and climate resiliency projects.
Additional information: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB246

Policies/Plans

– *Climate Change Research Plan for California (2015)*

Developed by the Climate Action Team's Research Working Group, this Plan presents priorities for the next 3 - 5 years for policy-relevant, California-specific research.
Additional information:
http://www.climatechange.ca.gov/climate_action_team/reports/CAT_research_plan_2015.pdf

– *Final 2017 Update – California's Climate Change Scoping Plan (2017)*
The California Air Resources Board is required to regularly update the State's Climate Change Scoping Plan, describing California's approach to reducing emissions to 40 percent below 1990 levels by 2030. This latest plan update articulates the State's strategy; building on past successes, strengthening major carbon mitigation programs, and further integrating efforts to reduce GHGs and air pollution.
Additional Information:https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

– *Vibrant Communities and Landscapes and Potential State-Level Strategies to Advance Sustainable, Equitable Communities and Reduce Vehicle Miles of Travel (Appendix C of the Scoping Plan, 2017)*
An interagency vision for land use, and for discussion, Potential State-Level Strategies to Advance Sustainable, Equitable Communities and Reduce Vehicle Miles of Travel (VMT).
Additional information: https://www.arb.ca.gov/cc/scopingplan/2030sp_appc_vmt_final.pdf

– *Safeguarding California Plan: 2018 Update – California's Climate Adaptation Strategy (2018)*
This plan serves as the State's roadmap for everything state agencies are doing and will do to protect communities, infrastructure, services, and the natural environment from climate change impacts. It features a strategy that covers programmatic and policy responses across different policy areas, and discusses ongoing related work that coordinates local and regional adaptation action with developments in climate impact science.
Additional information: http://resources.ca.gov/climate/safeguarding/#safeguard

– *Executive Order B-30-15 (2015)*
Governor Brown's Executive Order B-30-15 established a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050.
Additional information: https://www.gov.ca.gov/2015/04/29/news18938/

– *Executive Order B-48-18 (2018)*
Executive Order B-48-18 implements Governor Brown's call for state entities to work with the private sector and all appropriate levels of government to put at least 5 million ZEVs on California roads by 2030, and to continue partnering with regional and local governments to streamline ZEV infrastructure installation processes wherever possible.
Additional information: https://www.gov.ca.gov/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/

Research References
Refer to the links below for information about past Climate Change research projects and activities funded by the State:

– Cal-Adapt's Research Catalog: http://v1.cal-adapt.org/research/

– California Air Resources Board's Research Catalog: https://www.arb.ca.gov/research/projects.htm

– California Department of Food and Agriculture's Office of Environmental Farming and Innovation: https://www.cdfa.ca.gov/oefi/

- California Department of Health's Climate Change and Health Equity Program: https://www.cdph.ca.gov/Programs/OHE/Pages/CCHEP.aspx

- California Energy Commission's Research and Development Web Page http://www.energy.ca.gov/research/

- Caltrans Division of Research, Innovation and System Information's Data Library: http://www.dot.ca.gov/drisi/library.html

- 4th California Climate Change Assessment: http://resources.ca.gov/climate/safeguarding/research/

APPENDIX C: 2018 RESEARCH INVESTMENT AREAS

To maximize the effectiveness of this initial investment, the 2018 Solicitation for the Climate Change Research Program will focus investment on the following research topics within four research priority areas. Researchers are invited to develop proposals that address one or more given topics through a thoughtfully designed research approach that integrates all relevant disciplines and research methods. The areas of inquiry are designed to provide direction to the proposer, but do not impose a given academic discipline or research methodology.

Research Area 1: Supporting and Protecting Vulnerable Communities from the Impacts of Climate Change

Specific topics of interest include the following:

- What is a working definition of climate change vulnerability that integrates climate change risk, socioeconomic considerations, and other factors that contribute to vulnerability?
    - Can this be integrated in State planning, policy, and investment decisions?
    - How does this vary across urban and rural parts of the State?
    - How do place-based and population-based factors contribute to climate change vulnerability?
- How are existing community climate vulnerabilities affected (positively and negatively) through state, regional, or local policy and planning decisions?
- How can communities assess, aggregate, and appropriately represent climate vulnerability when developing "hot spot" visualizations that aggregate multiple climate-related impacts?

Research Area 2: Accelerating and Supporting Transitions to Climate Smart Communities

In this research area, SGC is seeking proposals that examine the social and technological dimensions of creating more sustainable and resilient communities in California. Research in this area should include interdisciplinary approaches to understanding technological and societal change to meet climate change goals, including economic and sociological studies. Specific topics of interest include the following:

- What are the environmental quality, economic, and/or social implications of increased investments and adoption of low-carbon transportation technologies, including the Three Revolutions in transportation (electrification, automation, and shared mobility), active transportation, and public transportation?
- What tools are available or can be developed to measure progress toward and to achieve equitable outcomes during transitions?
- How can resilience best be integrated into planning, policy, program, and government investments to mitigate damage and enable communities to quickly recover from natural disasters?

Research Area 3: Integrating Land Use, Conservation, and Management into California Climate Change Programs

Land management, conversion, and conservation have important implications for meeting the State's climate change goals. Research in this area will examine the interconnections across development planning and the conservation and management of natural and working lands.

Specific topics of interest for the 2018 solicitation include the following:

- What strategies are available to improve the connection between SB 375 regional Sustainable Community Strategies, local planning efforts, and the conservation and/or restoration of natural and working lands?

- What are currently the biggest barriers to equitable infill development and what role can local, regional, and state agencies play in addressing those barriers?
- How does the State's need for infill development align with climate risk and hazards? How should climate change risk and community resilience be integrated into new development planning?
- What multi-attribute tools are available to account for the integrated benefits (local and downstream) of land management practices, such as forest management, agricultural food production, or watershed restoration? How can these tools be integrated into decisions, including conservation and food security investments?
- How can the State scale up and replicate specific models of land conservation and management to achieve climate change goals?

Research Area 4: Increasing Data Accessibility and Planning Support for State, Local, and Regional Climate Change Planning

Research in this area will focus on investments to support climate adaptation and resilience planning at the local and regional level, including better understanding user and stakeholder needs and the development of tools and resources to support planning.

Specific topics of interest for the 2018 solicitation include the following:

- How can Cal-Adapt be augmented to support and expand its utility beyond the energy sector and to satisfy the direction given in State and local planning guidance documents? What datasets are needed to support planning by state agencies, local governments, resource managers, special districts, or other users?
- What outreach and training modules are needed to assist local planners, natural and water resource managers, community-based organizations and others beyond the energy sector to use climate change data and projections? What datasets can be developed to further help local planners, managers, and others understand hazards in spatially explicit ways?
- How can communities assess, aggregate, and appropriately represent implications of multiple climate impacts to develop "hot spot" visualizations that aggregate multiple climate-related impacts?

ATTACHMENT 1:   RESEARCH PROPOSAL SUBMISSION QUESTIONAIRRE

The method of delivery for responding to the Climate Change Research Program solicitation is through the Department of Water Resources' Grants Review and Tracking System (GRanTS), a web-based grants application tool, available at: https://www.water.ca.gov/Work-With-Us/Grants-And-Loans/GRanTS/. This online tool allows proposers to submit their electronic documents to the SGC. Electronic files must be in Microsoft Word XP (.pdf format) and Excel Office Suite formats. Attachments requiring signatures may be scanned and submitted in PDF format.

This attachment provides the information that proposers are required to complete in the Submission Questionnaire. The first two sections of the questionnaire are pages that are required by the GRanTS tool.

Section I - Applicant Information Page: This section asks for basic information about the proposer and the lead Research Institution.

Question	Answer Type	Answer Options				Required Field?
APPLICANT INFORMATION						
Organization Name	Dropdown					X
Point of Contact	Drop Down	Existing User	Add new user			X
Point Of Contact Position Title	Text Box	50 characters				X
Proposal Name	Text Box	150 characters				X
Proposal Objective	Text Box	2000 characters				X
BUDGET						
Other Contribution	Number Box					
Local Contribution	Number Box					
Federal Contribution	Number Box					
In-kind Contribution	Number Box					
Amount Requested	Number Box					X
Total Proposal Costs	Number Box					X
GEOGRAPHIC INFORMATION (for GEO information, visit https://www.census.gov/geo/maps-data/data/geocoder.html)						
Latitude	Number Box	DD(+/-)	MM	SS		X
Longitude	Number Box	DD(+/-)	MM	SS		X
Longitude/Latitude Clarification	Text Box	250 characters				
Location	Text Box	100 characters				
County	Drop Down	CA Counties				X
Ground Water Basin	Drop Down	Basins				
Hydrologic Region	Drop Down	Regions				
Watershed	Text Box	250 characters				

LEGISLATIVE INFORMATION (for LEG information, visit http://findyourrep.legislature.ca.gov/ and https://www.govtrack.us/)				
Assembly District	Drop Down	Districts		X
Senate District	Drop Down	Districts		X
US Congressional District	Drop Down	Districts		X

Section II – Project Information: This section is another mandatory page on the tool. Users may use the address of the Research Institution rather than a project location to complete the mandatory questions in this section.

Question	Answer Type	Answer Options				Required Field?
PROJECT INFORMATION						
Project Name	Text Box	150 characters				X
Implementing Organization	Drop Down					
Secondary Implementing Org.	Text Box	125 characters				
Proposed Start Date	Date Box	dd/mm/yyyy				
Proposed End Date	Date Box	dd/mm/yyyy				
Scope of Work	Text Box	500 characters				
Project Description	Text Box	2000 characters				
Project Objective	Text Box	500 characters				
PROJECT BENEFIT INFORMATION						
Benefit Level	Drop Down	Primary/ Secondary	Tertiary/ Quaternary	Quniary	Septary	
Benefit Type	Drop Down	Research/ Planning				
Benefit	Drop Down	Clean Air (only)				
Description	Text Box	2000 characters				
Measurement	Number Box					
BUDGET (copies budget data from the Application Page)						
Other Contribution	Number Box					
Local Contribution	Number Box					
Federal Contribution	Number Box					
In-kind Contribution	Number Box					
Amount Requested	Number Box					X
Total Proposal Costs	Number Box					X
GEOGRAPHIC INFORMATION (copies geographic data from the Application Page)						
Latitude	Number Box	DD(+/-)	MM	SS		X
Longitude	Number Box	DD(+/-)	MM	SS		X

Longitude/Latitude Clarification	Text Box	250 characters		
Location	Text Box	100 characters		
County	Drop Down	CA Counties		X
Ground Water Basin	Drop Down	Basins		
Hydrologic Region	Drop Down	Regions		
Watershed	Text Box	250 characters		
LEGISLATIVE INFORMATION (copies legislative data from the Application Page)				
Assembly District	Drop Down	Districts		X
Senate District	Drop Down	Districts		X
US Congressional District	Drop Down	Districts		X

Section III - Project Summary: This page features an abstract of the proposed work and identifies specific information such as the project type, the research

Question	Answer Type	Answer Options		Required Field?
PROJECT ABSTRACT: The Project Abstract must not be more than 3500 characters (approximately one page) in length and must clearly address in separate statements: (1) an overview; (2) the intellectual merit of the proposed activity; and (3) the broader impacts resulting from the proposed activity. The overview includes a description of the activity that would result if the proposal were funded and a statement of objectives and methods to be employed. The statement on intellectual merit should describe the potential of the proposed activity to advance knowledge. The statement on broader impacts should describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes. The abstract should be written in the third person, informative to other persons working in the same or related fields, and, insofar as possible, understandable to a scientifically or technically literate lay reader.				
Provide a project abstract:	Text Box	3,500 characters		X
PRINCIPAL INVESTIGATOR (PI): The individual responsible for the scientific or technical direction of the project. All PIs and co-PIs are expected to have significant intellectual input to the project. The PI directs the project and is responsible for submission of the requisite project reports.				
Principal Investigator's Name	Text Box	30 characters		X
Principal Investigator's Title	Text Box	50 characters		X
Principal Investigator's Address (Institution, Department, Street Address, City, State, ZIP)	Text Box	50 characters		X
Principal Investigator's Telephone Number	Text Box	10 characters		X
Principal Investigator's Email Address	Text Box	90 characters		X
PROJECT MANAGER (PM): The individual responsible for satisfying the defined business and scientific objectives of the project (optional).				
Project Manager's Name	Text Box	30 characters		
Project Manager's Title	Text Box	50 characters		

Project Manager's Address (Institution, Department, Street Address, City, State, ZIP)	Text Box	50 characters				
Project Manager's Telephone Number	Text Box	10 characters				
Project Manager's Email Address	Text Box	90 characters				
PROJECT DURATION: The anticipated number of months to complete the proposed research						
Number of months to conduct and closeout the research project.	Text Box	25 characters				X
FUNDING REQUEST: Note the amount being requested for performing this research.						
Funding being requested to conduct this research	Text Box	25 characters				X
RESEARCH PRIORITY AREAS - 2018 INVESTMENTS: Identify which of the program's four research priority areas are addressed in this proposal (one answer required, may choose multiple areas).						
Identify the research priority area(s) that is/are addressed in this research:	Drop Down Box	(1) Supporting and Protecting Vulnerable Communities from the Impacts of Climate Change	(2) Accelerating and Supporting Transitions to Climate Smart Communities	(3) Integrating Land Use, Conservation, and Management into California Climate Change Programs	(4) Increasing Data Accessibility and Planning Support for State, Local, and Regional Climate Change Planning	X
PROJECT TYPE: Identify if this research proposal is competing for a **research project grant** (up to <u>ten</u> research proposals will be awarded between $100,000 and $1 million), or a **research partnership grant** (up to <u>five</u> research proposals will be awarded between $1 million and $4 million each). Proposers may **only** choose one option.						
Select the project type:	Drop Down Box	(1) Research Project Grants		(2) Research Partnership Grants		X
CLIMATE THEMES: Funding for this program was allocated to address climate issues and specifically calls out conducting research on reducing carbon emissions, including clean energy, adaptation, and resiliency, with an emphasis on California. Below, please note how this research aligns with the enabling legislation:						
Check if this research addresses any or all of the following issues:	Check Box (Yes, No)	Carbon emissions reduction	Clean energy	Adaptation	Resiliency	X
If none of the issues above were checked, please describe other climate themes that addressed by this research.	Text Box	30 characters				
Confirm that the following research components will occur in California:						
Lead Institution is Housed in CA.	Check Box	Yes	No			X
Any study areas or pilot will be located in CA.	Check Box	Yes	No	N/A		X
INDIRECT COST RATE (ICR): Identify if this research proposal is using the maximum allowable ICR of a 25% Modified Total Direct Cost Base. If the research proposal is using a different rate, please check other and describe (1) the rate being used and (2) the State agency or department that has negotiated the alternative rate with the research institution.						

This project is using the following Indirect Cost Rate:	Drop Down Box	(1) 25% MTDC	(2) Other		X
If Other:					
List the alternative ICR that will be used.	Text Box	50 characters			
Name the State agency or department that has established this rate with your research institution.	Text Box	50 characters			

<u>Section IV – Threshold Requirements</u>: This page asks the Researcher to describe how the proposed research meets the program's threshold requirements.

Question	Answer Type	Answer Options			Required Field?
FACILITATES GHG EMISSIONS REDUCTION: For purposes of meeting the threshold of facilitating the reduction in greenhouse gas (GHG) emissions, the proposer should discuss how this research, over time, can enable, assist or accelerate the reduction of GHG emissions in California. A quantifiable result is not required here, but rather a description of how the research finding will detail how the known qualities around emissions reductions are verified or advanced.					
The proposed research facilitates the reduction of greenhouse gas emissions.	Check Box	Yes	No		X
Discuss the role of this research in contributing to the facilitation of reducing of greenhouse gas emissions.	Text Box	1,000 characters			X
ADDRESSES BENEFITS TO DISADVANTAGED OR LOW-INCOME COMMUNITIES: Reading the definitions for these communities listed in Appendix A of the solicitation (specified in Chapter 4.1. of the Health and Safety Code (the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act), discuss how this research could result in, if applied in these communities, benefits to a community's residents and or businesses. Quantifiable measures are not required here, but rather a description of how the research will consider and respond to potential benefits for these communities.					
This proposal could provide benefits to low-income households, low-income communities or disadvantaged communities as defined in chapter 4.1 of the Health and Safety Code (the Greenhouse Gas Reduction Fund Investment Plan and Communities Revitalization Act, https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=2.&chapter=4.1.&article=)	Check Box	Yes	No		X
Discuss how the research could benefit low-income or disadvantaged communities:	Text Box	1,000 characters			X

PROGRAM GOALS: Describe how this project contributes to the seven program goals defined in the Research Investment Plan and the Program's Grant Solicitation. This narrative does not need to single out/respond to each goal individually. Instead the proposer should identify key principles of the research and discuss how particular program goals can be advanced through examination in this project.					
The proposed research aligns with the seven goals identified in the Climate Change Research Program's Research Investment Plan (http://sgc.ca.gov/programs/climate-research/docs/20180130-Final_Research_Investment_Plan.pdf).	Check Box	Yes	No		X
Aligns with the Climate Change Research Program's seven Program Goals:	Text Box	1,700 characters			X
MEANINGFUL COMMUNITY ENGAGEMENT: Briefly discuss the proposer's approach for engaging with members of a community, decision makers, and other stakeholders to develop more outcome-based research.					
The proposed research will integrate meaningful engagement throughout all phases of the project.	Check Box	Yes	No		X
How does this research integrate meaningful engagement throughout the life of the project?	Text Box	1,000 characters			X

Section V - Partnerships: The Climate Change Research Program prioritizes research that demonstrates how it partners with other academic institutions; philanthropic entities; federal and units of local government; community based organizations; and, not-for-profit and for-profit institutions to allow for greater flexibility in addressing important policy questions, to better utilize external expertise in evaluating local innovations; to more fully consider impacts and effectiveness proposed research; and, to translate findings and share data to assist with implementing the State's climate policy.

Update: State of California entities are not allowed to serve as a partner or to submit a letter of support on behalf of a research proposal

Question	Answer Type	Answer Options		Required Field?
PARTNER #1: An institution or organization participating in this research that will supply a letter of support for this submission identifying (1) the degree of participation and (2) any support being provided to the project.				
Name of the Partnership Organization or Institution:	Text Box	30 characters		X
Describe the role/responsibilities of this partner in the proposed research:	Text Box	250 characters		X
Partner #1 Contact Person's Name:	Text Box	30 characters		X
Partner #1 Contact Person's Title:	Text Box	50 characters		X

Partner #1 Contact Person's Telephone Number:	Telephone Format	( ) -		X
Partner #1 Contact Person's Address (street number and street name or PO Box, City, State, ZIP):	Text Box	100 characters		X
Partner #1 Contact Person's Email Address:	Text Box	90 characters		X
PARTNER #2: An institution or organization participating in this research that will supply a letter of support for this submission identifying (1) the degree of participation and (2) any support being provided to the project.				
Describe the role/responsibilities of this partner in the proposed research:	Text Box	250 characters		
Name of the Partnership Organization or Institution:	Text Box	30 characters		
Partner #2 Contact Person's Name:	Text Box	30 characters		
Partner #2 Contact Person's Title:	Text Box	50 characters		
Partner #2 Contact Person's Telephone Number:	Telephone Format	( ) -		
Partner #2 Contact Person's Address (street number and street name or PO Box, City, State, ZIP):	Text Box	100 characters		
Partner #2 Contact Person's Email Address:	Text Box	90 characters		
PARTNER #3: An institution or organization participating in this research that will supply a letter of support for this submission identifying (1) the degree of participation and (2) any support being provided to the project.				
Describe the role/responsibilities of this partner in the proposed research:	Text Box	250 characters		
Name of the Partnership Organization or Institution:	Text Box	100 characters		
Partner #3 Contact Person's Name:	Text Box	30 characters		
Partner #3 Contact Person's Title:	Text Box	50 characters		
Partner #3 Contact Person's Telephone Number:	Telephone Format	( ) -		
Partner #3 Contact Person's Address (street number and street name or PO Box, City, State, ZIP):	Text Box	100 characters		
Partner #3 Contact Person's Email Address:	Text Box	90 characters		
PARTNER #4: An institution or organization participating in this research that will supply a letter of support for this submission identifying (1) the degree of participation and (2) any support being provided to the project.				

Describe the role/responsibilities of this partner in the proposed research:	Text Box	250 characters		
Name of the Partnership Organization or Institution:	Text Box	30 characters		
Partner #4 Contact Person's Name:	Text Box	30 characters		
Partner #4 Contact Person's Title:	Text Box	50 characters		
Partner #4 Contact Person's Telephone Number:	Telephone Format	( ) -		
Partner #4 Contact Person's Address (street number and street name or PO Box, City, State, ZIP):	Text Box	100 characters		
Partner #4 Contact Person's Email Address:	Text Box	90 characters		
PARTNER #5: An institution or organization participating in this research that will supply a letter of support for this submission identifying (1) the degree of participation and (2) any support being provided to the project.				
Describe the role/responsibilities of this partner in the proposed research:	Text Box	250 characters		
Name of the Partnership Organization or Institution:	Text Box	30 characters		
Partner #5 Contact Person's Name:	Text Box	30 characters		
Partner #5 Contact Person's Title:	Text Box	50 characters		
Partner #5 Contact Person's Telephone Number:	Telephone Format	( ) -		
Partner #5 Contact Person's Address (street number and street name or PO Box, City, State, ZIP):	Text Box	100 characters		
Partner #5 Contact Person's Email Address:	Text Box	90 characters		

Section VI – Terms and Conditions: Awarded institutions are required to review and agree to the   following requirements governing the execution of a research project and the administration of the grant.

Question	Answer Type	Answer Options		Required Field?
CONFIDENTIALITY: The proposing research institution understands that though the entire evaluation process from receipt of applications up to the posting of the SGC staff's recommended list of projects is confidential, all submitted documents will become public records after the Council awards funding to research projects if the solicitation is cancelled. <u>The SGC will not accept or retain applications that identify any portion as confidential</u>.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No	X

SOLICITATION ERRORS: If the proposer discovers any ambiguity, conflict, discrepancy, omission, or other error in the solicitation, the applicant should immediately notify the SGC of the error in writing and request modification or clarification of the solicitation. The SGC will provide modifications or clarifications by written notice to all parties who requested the solicitation, without divulging the source of the request for clarification. <u>The SGC is not responsible for failure to correct errors</u>.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
PROPOSAL MODIFICATION OR WITHDRAWAL: Proposers may withdraw or modify a research submission before the solicitation deadline by sending a letter to the SGC project manager. Applications cannot be changed after that date and time. A proposal cannot be "timed" to expire on a specific date. For example, a statement such as the following is non-responsive to the solicitation: "This application and the cost estimate are valid for 60 days."				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
COMMUNICATIONS: The Grant Recipients are required to use the SGC and CCI names and/or logos for all published materials related to the research funded through this program. All press releases, fact sheets, talking points and press interviews related to this research must include the phrase "administered by the Strategic Growth Council and funded through the California Climate Investments," and logos should be included where applicable. Additionally, a point of contact for all press inquiries and communications needs regarding awarded research must be submitted to the SGC (name, phone number and email address). Finally, Grant Recipients will be required to prepare a two-page summary of the awarded research, corresponding to the template provided by the SGC for display on the SGC's website and use for other communications purposes.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
CALIFORNIA AIR RESOURCES BOARD (CARB) REPORTING REQUIREMENTS: Grant Recipients must adhere to the reporting requirements outlined by CARB in their Funding Guidelines to Agencies that Administer California Climate Investments. CARB is currently updating the Funding Guidelines, which are due to be released in the Spring of 2018. The updated guidelines may include changes to reporting requirements for this research project.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
OPEN ACCESS PUBLISHING: Grant Recipients are responsible to budget for open access publishing for all of the published materials that relates to the awarded research. Free and open access is required to final manuscripts of scholarly articles, reports, and other products produced entirely or primarily with program funding. These and additional published materials will be required to be submitted to Integrated Climate Adaptation and Resiliency Program's Adaptation Clearinghouse after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available through the Clearinghouse by the Governor's Office of Planning and Research one year after publication by the journal.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
RESEARCH COMPLIANCE STATEMENT: The proposing institution agrees to comply with all state and federal policies including, but not limited to, human subject research, research misconduct and conflict of interest regulations.				
Check here to indicate that the proposer has read and understands this disclaimer.	Check Box	Yes	No		X
Indicate which of the following statements apply to the research or to the proposing institution:				
The proposed research involves human subjects.	Check Box	Yes	No		

The proposing institution has developed a scientific integrity policy.	Check Box	Yes	No		
The proposing institution has developed a data sharing policy.	Check Box	Yes	No		
The proposing institution has developed policy to implement Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act.	Check Box	Yes	No		

Section VII – Attachments: Researchers can attach up to ten separate files. Each attachment file size must be 2 GB or less. The list of attachments that should be included as part of the submission package include:

1) **Title Page** (two pages)

2) **Project Narrative**: ten pages, including charts, figures or diagrams.

3) **Project Budget** Forms (use template)

4) **Scope of Work** (use template)

5) **Biographical Sketch** (two pages each, personnel working on the project)

   - **Collaborations and Other Affiliations** (no limit)

6) **Partnership Overview** (up to ten organizations)

7) **Letters of Support** (one page for each reference, maximum of seven letters)

8) **Prior Research** Summary (past projects managed by proposal's PI(s) within the past three years)

9) **References and Literature Citations** (two pages)

10) **Quality Assurance Statement or Data Management Plan** (Optional)

Maximum file size is 2 GB. File Name Limit: 125 Characters.

ATTACHMENT 2:   PROJECT BUDGET

Organization: _____   Principal Investigator: _____

Proposal Title: _____

BUDGET CATEGORIES			From: To:	7/1/2017 6/30/2018 YEAR 1		7/1/2018 6/30/2019 YEAR 2		7/1/2019 6/30/2020 YEAR 3		7/1/2020 3/31/2021 YEAR 4		TOTALS	
PERSONNEL: Salary and Fringe Benefits.													
Name and Payroll Title	Monthly Rate	Benefits (% of Salary)		Months	Amount	Months	Amount	Months	Amount	Months	Amount	Months	Amount
					$0		$0		$0		$0	**0**	**$0**
					$0		$0		$0		$0	**0**	**$0**
TOTAL PAYROLL COSTS:				**0**	**$0**	**0**	**$0**	**0**	**$0**	**0**	**$0**	**0**	**$0**
TRAVEL													
Item	Cost	Per		Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	**Nmbr.**	**Amount**
					$0		$0		$0		$0	**0**	**$0**
					$0		$0		$0		$0	**0**	**$0**
TOTAL TRAVEL COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**
MATERIALS & SUPPLIES													
Item	Cost	Per		Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	**Nmbr.**	**Amount**
					$0		$0		$0		$0	**0**	**$0**
					$0		$0		$0		$0	**0**	**$0**
TOTAL MATERIAL AND SUPPLY COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**
MISCELLANEOUS													
Item	Cost	Per		Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	**Nmbr.**	**Amount**
					$0		$0		$0		$0	**0**	**$0**
					$0		$0		$0		$0	**0**	**$0**
TOTAL MISCELLANEOUS COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**
CONSULTANTS													
Payroll													
Firm	Title	Hr. Rate		Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	**Hours**	**Amount**
					$0		$0		$0		$0	**0**	**$0**

										0	$0
				0	$0	0	$0	0	$0	0	$0	0	$0

Travel

Item	Cost	Per		Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	**Nmbr.**	**Amount**
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0		$0
TOTAL CONSULTANT COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**

SUB-RECIPEIENT

Payroll

Organization	Title	Hr. Rate		Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount	**Hours**	**Amount**
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0	0	$0

Travel

Item	Cost	Per		Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	Nmbr.	Amount	**Nmbr.**	**Amount**
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0	0	$0
					$0		$0		$0		$0		$0
TOTAL SUBRECIPIENT COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**
TOTAL DIRECT COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**

INDIRECT COST RATE

Budget Item	ICR %	F&A Base		Less:	Amount	Less:	Amount	Less:	Amount	Less:	Amount	Less:	Amount
PAYROLL					$0		$0		$0		$0	0	$0
TRAVEL					$0		$0		$0		$0	0	$0
MATERIALS & SUPPLIES					$0		$0		$0		$0	0	$0
MISCELLAENEOUS					$0		$0		$0		$0	0	$0
CONSULTANTS					$0		$0		$0		$0	0	$0
SUBRECIEPIENTS					$0		$0		$0		$0	$0	$0
TOTAL INDIRECT COSTS:					**$0**		**$0**		**$0**		**$0**		**$0**
TOTAL BUDGET REQUEST:					**$0**		**$0**		**$0**		**$0**		**$0**

ATTACHMENT 3: SCOPE OF WORK

The Scope of Work (or work plan) should be a summary document that identifies basic information about the flow of work, a breakdown of how the research phases (or tasks) would occur, information about expected deliverables, and a timeline that anticipates the timing of each phase and when milestones or outcomes are expected to transpire. More detailed planning can be addressed in the Project Narrative (Attachment 4). This document should present information in a segmented fashion that contains a graphic timeline as well as a table of objectives, activities, and responsibilities. The elements of the Scope of Work should include:

Background. Provide an overarching statement identifying the goals, objectives, and actions related to the purpose of this research; and any practical and policy information, technological requirements or specifications, and legal limitations that may apply.

Specific Tasks or Phases of Work. Outline the specific tasks (or phases) that are being proposed, breaking down the order of how each stage will occur, and tying each segment to objectives, approaches, methodologies and/or strategies that will be employed:

–   Describe the items, products, or results to be delivered.

–   Discuss the roles of the research institution, partners, and/or sub-recipients.

–   Identify any planned outreach or engagement.

–   Provide information about delivery of completed progress reports and final report, or other applicable materials.

Timeline (Schedule of Deliverables). Submit a chart that identifies performance timelines or completion dates and includes anticipated start and completion times for each task/phase of the project. Include a column that identifies the project Milestones or Expected Outcomes and indicate the expected completion date for each task deliverable.

ATTACHMENT 4:   PROJECT NARRATIVE

The Project Narrative should detail the proposer's plan and approach for conducting research that will advance one or more of the 2018 Research Priorities listed the Research Investment Plan (see Appendix C). This narrative should be 8-10 pages in length (11-pt font and 1" margins). It should address each of the three elements listed below in sufficient detail using the headings provided. The subjects and themes within each element should be addressed as applicable; however this is a suggested, not mandatory, for organizing the narrative. The narrative should be written in straightforward language; keeping in mind that the members of the Advisory Committee possess an understanding of the content knowledge but not necessarily expertise in the specific area of study. Proposals should avoid the use of technical or discipline-specific jargon. Spell out any acronyms that are not universally understood.

The Project Narrative should consider the criteria developed in Figure 6: Technical Merit Criteria and must consist of the three following three sections, and at a minimum include the topics (with clear headings) identified below:

1. **Description.** Provide the following elements for the research being proposed:

    Research Aims and Objectives. A concise description of what the research intends to do. Describe the overall goal of this research, and then the individual aims and objectives. Specified objectives should enable comparison later to project results.

    Research Question(s) and Hypothesis.

    Research Approach and Methods. Information about research subjects (inclusion/exclusion criteria, recruitment methods, informed consent procedures, research sites); Discussion of research methods being applied; Explanation of data collection protocols (how subject privacy and data confidentiality will be addressed, benefits and risks of this research and risk minimization actions being employed; Describe how research findings will be translated and disseminated to support climate-action; and, state any anticipated problems or barriers and the approach for resolution.

    Anticipated Research Applications and Outcomes.

2. **Research Merits.**

    Significance/Importance. Provide a clear and compelling rationale for why the proposed research matters. Indicate how the proposed project will advance knowledge, address an important scientific or scholarly problem, demonstrate intellectual or creative significance, and/or benefit society in meaningful ways. If applicable, include hypotheses to be tested, specific goals/aims, and relevant background/information or preliminary data in support of the project.

    Innovation/Novelty. Outline the ways in which this project's proposed work is new/innovative in its approach, methods, or techniques in comparison to previous work in the field.

    Broader Impacts. Discuss the broader impacts of the proposed activities, such as the research itself, through the activities that are directly related to specific research projects, or through complimentary activities that advance outcome based research. Scientific knowledge and activities that contribute to achieving relevant societal and climate action outcomes are especially important to note.

    Feasibility, Resources, and Timeline. Describe the plan for carrying out the proposed research activities, including research design, work plan, methodological approach, availability of necessary resources, and timeline for completion of tasks/milestones. If requesting multi-year funding, provide a rationale and justification for the request.

    Investigators/Partners: Describe how the PI and partners are well-suited to carry out the proposed project. For Multi-PI proposals, indicate how the project brings together individuals from different disciplines and how the collaboration

will advance the proposed project. For single PI proposals, indicate how the proposed work enhances and/or advances the PI's scholarship or creative products.

Impact and Outcomes. Indicate the value or impact of the proposed project, once completed. How does the project reflect the program's 2018 Research Investment Priorities and advance the State's Climate Goals? In what ways will the results of this work be transformative within its discipline and beyond? What broader societal benefits does it promise? What is your plan / mechanism for assessing the project's success and evaluating outcomes? For Multi-PI, interdisciplinary proposals indicate the external funding opportunity that will be targeted as a result of this opportunity.

3. **Meaningful Engagement.** Review the questions identified in item #2 of Figure 6: Technical Merit Criteria, to develop this component of the narrative.

Improving Research Quality, Validity and Sensitivity. Provide a clear and compelling rationale for how the proposed research will use meaningful engagement to draw upon the wisdom of a larger body of stakeholders, promote trust among interested parties, improve how research findings are translated into policy and practice, and accelerate the uptake of research findings into climate action.

Capacity for Meaningful Engagement. Discuss the history and expertise of the research proposal project team at engaging other research institutions, multi-stakeholder partnerships, key stakeholders, community based organizers, policymakers, and others to transform research findings into action, and to maintain a meaningful level of ongoing collaboration throughout and beyond the duration of a specific project. Provide examples of how this engagement was consistently applied throughout all phases of a research endeavor. Demonstrate how these efforts resulted in innovative and meaningful policies, programs, or practices built upon the input and expertise of different partners (i.e., Tribes, or local public agency staff; advocacy groups, student associations, or community-based organizations; industry trade groups, business associations or workforce development boards; overburdened individuals, businesses and groups; etc.). Update: State of California entities are not allowed to serve as a partner or to submit a letter of support on behalf of a research proposal (see Section I, Introduction).

Structure for Engagement. Describe the framework that will be used to structure the partnerships identified in this submission to ensure a diverse representation from policy professionals, academic experts in various physical and social science fields of study, community based organizations, economic leaders, and/or other key stakeholders. Explain how non-traditional research partners in this structure will enrich the structure and help to achieve the goals of the proposed research. How does this structure ensure that the proposed research better addresses concrete needs and delivers direct benefits?

Innovation/Originality. Discuss how the proposed engagement and partnership structure will support and advance the project's relevance and the utility of the proposed research process, methodology, and results. How will this engagement build relationships that result in opportunities for input and feedback on the project's design and approach through delivery mechanisms? Will new or original communication processes be applied to disseminate research findings, data, and/or recommendations to non-traditional audiences?

Impact and Outcomes. Identify how the intended engagement approach and structure described in this section will contribute to the intended impacts and outcomes of the proposed research. How will the project's research findings or results give rise to distribution of the findings, data, and recommendations; support opportunities for community based investigations or studies that reproduce methods such as, Community Based Participatory Research and community monitoring/data gathering; assist and share resources with others to engage audiences and advance the climate goals?

ATTACHMENT 5:   QUALITY ASSURANCE STATEMENT

A Quality Assurance Statement (QAS) is required for research proposals that involves data collection or processing, conducting surveys, modeling, method development, or the development of tools or technology (whether hardware-based or via new techniques). The QAS should state how processes would be used to ensure that the products of the research satisfy the intended research objectives.

The QAS should address each of the applicable sections below by discussing key points or referencing the specific location of the information in the Project Narrative (not all will apply). A lab or institution may substitute its own data management plan or its NSF Data Management Plan in place of the Quality Assurance Statement.

(1)   Identify the individual(s) who will be responsible for the quality assurance (QA) and quality control (QC) aspects of the research along with a brief description of this person's functions, experience, and authority within the research organization. Describe the general approach for conducting quality research. (QA is a system of management activities to ensure that a process or item is of <u>the type and quality needed</u> for the research. QC is a system of activities that <u>measures the attributes and performance of a process or item</u> against the standards defined in the research documentation to verify that they meet those stated requirements.)

(2)   Discuss the quantitative and/or qualitative procedures that will be used to evaluate the success of the research proposal's objectives, including quality objectives, and hypotheses to be tested. Include any plans for peer or other reviews of the study design or analytical methods.

(3)   Address each of the following research elements, as applicable:

   (a)   Collection of new/primary data.

   (b)   Use of existing/secondary data (e.g., data previously collected for other purposes or from other sources).

   (c)   Method development: describe the scope and application of methods, tests, or measurements to be conducted to support the method development, the type of instrumentation that will be used and any required instrument conditions (e.g., calibration frequency), planned QC checks and associated criteria (e.g., spikes, replicates, blanks), and tests to verify the method's performance.

   (d)   Development or refinement of models.

   (e)   Development or operation of tools/technology.

   (f)   Conducting surveys: discuss the justification for both the overall research project and all sub-samples for specific treatments or tests. Identify and explain the rational for the proposed statistical techniques (e.g., evaluation of statistical power).

(4)   Discuss data management activities (e.g., record-keeping procedures, data-handling procedures, and the approach used for data storage and retrieval on electronic media). Include any required computer hardware and software and address any specific performance requirements for the hardware/software.

NOTE: If selected for award, the researcher will be expected to provide additional quality assurance documentation, if requested by the terms and conditions of the agreement.